

The opinion in support of the decision being entered today was **not** written for publication and is **not** binding precedent of the Board.

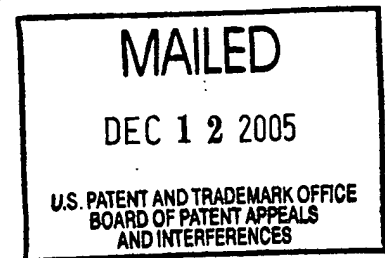
UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

**Ex parte** RICHARD G. KETCHUM,  
STUART SERKIN, JOHN MALITZIS,  
PETER MARTYN, DEBRA PETER,  
PATTI DIZENHAUS and DOUG BROWN

Appeal No. 2005-1842  
Application No. 09/401,872

HEARD: NOVEMBER 17, 2005



Before HAIRSTON, BLANKENSHIP, and MACDONALD, **Administrative Patent Judges.**

MACDONALD, **Administrative Patent Judge.**

**DECISION ON APPEAL**

This is a decision on appeal from the final rejection of claims 1, 3-10, and 12-24. Claims 2 and 11 have been canceled. Claims 25-49 were subject to a restriction and were withdrawn from further consideration. Claims 50-67 were added in reply to an office action dated September 16, 2003, and were not entered by the examiner. Therefore, claims 25-67 are not before us in this appeal.

Invention

Appellants' invention relates to system, graphical user interface, and method for providing market quotes or orders at multiple price levels to market participants.

An electronic market for trading of securities includes a plurality of client stations for entering quotes for securities and a server process that receives quotes from the clients, aggregates the quotes and causes a total of all aggregated quotes to be displayed for a plurality of price levels on the client systems.

According to an additional aspect of the present invention, a graphical user interface for an electronic market for trading products includes an aggregate window which displays aggregated quotes for a plurality of price levels of a product traded in the market.

According to an additional aspect of the present invention, a method of operating an electronic market for trading products includes aggregating non-attributable interest in the product for a plurality of price levels. Appellants' specification at page 2, lines 2-31.

Claims 1, 10, and 16 are representative of the claimed invention and are reproduced as follows:

1. An electronic market system for trading of securities comprises:  
a plurality of client stations for entering quotes for securities; and  
a server process that receives quotes from the client stations, aggregates the quotes and causes a total of all aggregated quotes to be displayed for each of a plurality of price levels on the client systems and causes a current quote window to be displayed on the client systems in proximity to the aggregated quotes.

10. A graphical user interface for an electronic market for trading products comprises:  
an aggregate window having a first plurality of indicators that displays totals of aggregated interest of a second plurality of market participants that exists in the electronic market at each of a third plurality of price levels of a product traded in the market and a current quote window disposed adjacent the aggregate window.

16. A method of operating an electronic market for trading products comprises:  
aggregating non-attributable interest in the product to provide a total of all non-attributable interest at a plurality of price levels.

#### References

The references relied on by the Examiner are as follows:

Guttermann et al. (Guttermann)	5,297,031	March 22, 1994
Martyn et al. (Martyn)	6,195,647	February 27, 2001 (Filed September 26, 1996)

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Korhammer et al. (Korhammer)	6,278,982	August 21, 2001 (Filed April 21, 1999)
Buist <sup>1</sup>	6,408,282	June 18, 2002 (Filed April 15, 1999)

### **Rejections At Issue**

Claims 1, 3-10, 14-21, and 24, stand rejected under 35 U.S.C. § 103 as being obvious over the combination of Korhammer and Gutterman.

Claims 12-13 and 22-23, stand rejected under 35 U.S.C. § 103 as being obvious over the combination of Korhammer, Gutterman and Martyn.

Throughout our opinion, we make references to the Appellants' briefs, and to the Examiner's Answer for the respective details thereof.<sup>2</sup>

### **OPINION**

With full consideration being given to the subject matter on appeal, the Examiner's rejections and the arguments of the

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<sup>1</sup> Referenced at page 13 of the Examiner's answer, but not relied upon for rejecting any of the examined claims.

<sup>2</sup> Appellants filed an appeal brief on October 14, 2004, fully replacing the defective briefs filed on January 15, 2004, and April 15, 2004. Appellants filed a reply brief on March 14, 2005, in response to the Examiner's new grounds of rejection in

Appellants and the Examiner, for the reasons stated *infra*, we reverse the Examiner's rejection of claims 1, 3-9, and 16-23, under 35 U.S.C. § 103; and we affirm the Examiner's rejection of claims 10, 12-15, and 24, under 35 U.S.C. § 103.

We also use our authority under 37 CFR § 41.50(b) to enter a new grounds of rejection of claims 1, 3-9, 12-13, 16-18, and 24.

The basis for this is set forth in detail below.

Only those arguments actually made by Appellants have been considered in this decision. Arguments that Appellants could have made but chose not to make in the brief have not been considered. We deem such arguments to be waived by Appellants [see 37 CFR § 41.37(c)(1)(vii) effective September 13, 2004 replacing 37 CFR § 1.192(a)].

Appellants have indicated that for purposes of this appeal the claims stand or fall together in nine groupings:

Claims 1, 3, 5, 6, and 9, as Group I;

Claim 4, as Group II;

Claims 7 and 8, as Group III;

Claims 10, 11, 12, 14, and 24, as Group IV;

Claim 13, as Group V;

Claim 15, as Group VI;

Claim 16, as Group VII;

Claims 17, 18, 20, and 23, as Group VIII; and

Claims 19, 21, and 22, as Group IX.

See page 7 of the brief filed on October 14, 2004. Furthermore, Appellants argue each group of claims separately and explain why the claims of each group are believed to be separately patentable. See pages 2-15 of the reply brief. We will, thereby, consider Appellants' claims as standing or falling together in the nine groups noted above, and we will treat:

Claim 1 as a representative claim of Groups I-III;

Claim 10 as a representative claim of Group IV;

Claim 13 as a representative claim of Group V;

Claim 15 as a representative claim of Group VI; and

Claim 16 as a representative claim of Group VII-IX.

**I. Whether the Rejection of Claims 1 and 3-9 Under  
35 U.S.C. § 103 is proper?**

It is our view, after consideration of the record before us, that the evidence relied upon and the level of skill in the particular art would not have suggested to one of ordinary skill

in the art the invention as set forth in claims 1 and 3-9.

Accordingly, we reverse.

In rejecting claims under 35 U.S.C. § 103, the Examiner bears the initial burden of establishing a **prima facie** case of obviousness. **In re Oetiker**, 977 F.2d 1443, 1445, 24 USPQ2d 1443, 1444 (Fed. Cir. 1992). **See also In re Piasecki**, 745 F.2d 1468, 1472, 223 USPQ 785, 788 (Fed. Cir. 1984). The Examiner can satisfy this burden by showing that some objective teaching in the prior art or knowledge generally available to one of ordinary skill in the art suggests the claimed subject matter. **In re Fine**, 837 F.2d 1071, 1074, 5 USPQ2d 1596, 1598 (Fed. Cir. 1988).

Only if this initial burden is met does the burden of coming forward with evidence or argument shift to the Appellants. **Oetiker**, 977 F.2d at 1445, 24 USPQ2d at 1444. **See also Piasecki**, 745 F.2d at 1472, 223 USPQ at 788.

An obviousness analysis commences with a review and consideration of all the pertinent evidence and arguments. "In reviewing the [E]xaminer's decision on appeal, the Board must necessarily weigh all of the evidence and argument." **Oetiker**, 977 F.2d at 1445, 24 USPQ2d at 1444. "[T]he Board must not only assure that the requisite findings are made, based on evidence of

record, but must also explain the reasoning by which the findings are deemed to support the agency's conclusion." **In re Lee**, 277 F.3d 1338, 1344, 61 USPQ2d 1430, 1434 (Fed. Cir. 2002).

With respect to independent claim 1, Appellants argue at page 2 of the reply brief, "[t]here is not a single teaching in Korhammer that the examiner has pointed to that shows that totaling quotes for each price level is inherent in Korhammer" as contended by the Examiner at page 4 of the answer. We agree. "To establish inherency, the extrinsic evidence 'must make clear that the missing descriptive matter is necessarily present in the thing described in the reference, and that it would be so recognized by persons of ordinary skill.'" **In re Robertson**, 169 F.3d 743, 745, 49 USPQ2d 1949, 1950-51 (Fed. Cir. 1999) (citation omitted). The Examiner has not provided an explanation as to how they arrive at their finding of inherency, and we find no basis in either reference for the Examiner's position. As the Examiner's position on inherency is also the basis for the rejection of the claims in Groups II and III, we treat those claims here with Group I.

Therefore, we will not sustain the Examiner's rejection under 35 U.S.C. § 103.



**II. Whether the Rejection of Claims 10, 12, 14, and 24 Under  
35 U.S.C. § 103 is proper?**

It is our view, after consideration of the record before us, that the evidence relied upon and the level of skill in the particular art would have suggested to one of ordinary skill in the art the invention as set forth in claims 10, 12, 14, and 24. Accordingly, we affirm.

To determine whether claim 10 is obvious over the references, we must first determine the scope of the claim.

Claim 10 recites:

A graphical user interface for an electronic market for trading products comprises:  
an aggregate window having a first plurality of indicators that displays [nonfunctional descriptive material in the form of] totals of aggregated interest of a second plurality of market participants that exists in the electronic market at each of a third plurality of price levels of a product traded in the market [;] and  
a current quote window [, that displays nonfunctional descriptive material,] disposed adjacent the aggregate window.

Korhammer teaches a graphical user interface for an electronic market for trading products at figure 5. Korhammer's interface at figure 5 comprises a first window having a first plurality of indicators that displays nonfunctional descriptive material in the scrollable window forming the bottom 90% of the

figure. The indicators comprise the 44 sets of four character identifiers, their volume, and their price (analogous to items 265, 266, and 267 in Korhammer's figure 4) in the two columns of the first window. Korhammer's interface at figure 5 also teaches a second window (analogous to item 253 in Korhammer's figure 4), that displays nonfunctional descriptive material, disposed adjacent the first window. That is, Korhammer teaches displaying nonfunctional descriptive material in the form of bid and offer prices (in a first window) and last trade price, etc. (in a second window adjacent the first window). For the sake of argument, we will take the position that Korhammer does not teach nonfunctional descriptive material in the form of "totals of aggregated interest of a second plurality of market participants that exists in the electronic market at each of a third plurality of price levels of a product traded in the market" as recited in claim 10. However, nonfunctional descriptive material cannot render nonobvious an invention that would have otherwise been obvious. **In re Ngai**, 367 F.3d 1336, 1339, 70 USPQ2d 1862, 1864 (Fed. Cir. 2004). Cf. **In re Gulack**, 703 F.2d 1381, 1385, 217 USPQ 401, 404 (Fed. Cir. 1983) (when descriptive material is not functionally related to the substrate, the descriptive material

will not distinguish the invention from the prior art in terms of patentability).

Common situations involving nonfunctional descriptive material are:

- a computer-readable storage medium that differs from the prior art solely with respect to nonfunctional descriptive material, such as music or a literary work, encoded on the medium,
- a computer that differs from the prior art solely with respect to nonfunctional descriptive material that cannot alter how the machine functions (i.e., the descriptive material does not reconfigure the computer), or
- a process that differs from the prior art only with respect to nonfunctional descriptive material that cannot alter how the process steps are to be performed to achieve the utility of the invention.

Thus, if the prior art suggests storing a song on a disk, merely choosing a particular song to store on the disk would be presumed to be well within the level of ordinary skill in the art at the time the invention was made. The difference between the prior art and the claimed invention is simply a rearrangement of nonfunctional descriptive material.

In view of the above discussion, it is our view, that since Korhammer teaches all the limitations of claim 10 except the nonfunctional descriptive material, Gutterman is not necessary for a proper rejection under 35 U.S.C. § 103 of representative

claim 10, as Korhammer discloses all that is claimed. A disclosure that anticipates under 35 U.S.C. § 102 also renders the claim unpatentable under 35 U.S.C. § 103, for "anticipation is the epitome of obviousness." **Jones v. Hardy**, 727 F.2d 1524, 1529, 220 USPQ 1021, 1025 (Fed. Cir. 1984). **See also In re Fracalossi**, 681 F.2d 792, 794, 215 USPQ 569, 571 (CCPA 1982); **In re Pearson**, 494 F.2d 1399, 1402, 181 USPQ 641, 644 (CCPA 1974).<sup>3</sup>

Accordingly, the Examiner's obviousness rejection of representative claim 10 is sustained based on Korhammer alone.

With respect to claim 10, Appellants argue at page 8 of the brief, "Korhammer does not teach aggregation of quotes for each price level nor is an aggregated value for each price level shown in any of the figures." We do not find this argument persuasive, as claim 10 does not recite the function of aggregating quotes. As to the feature of showing (displaying) aggregated value (totals), this nonfunctional descriptive material does not distinguish over the prior art as discussed above.

Therefore, we will sustain the Examiner's rejection under 35 U.S.C. § 103.

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<sup>3</sup> The Board may rely on less than all of the references applied by the Examiner in an obviousness rationale without designating it as a new ground of rejection. **In re Bush**, 296 F.2d 491, 496, 131 USPQ 263, 266-67 (CCPA 1961); **In re Boyer**, 363 F.2d 455, 458

**III. Whether the Rejection of Claim 13 Under 35 U.S.C. § 103  
is proper?**

It is our view, after consideration of the record before us, that the evidence relied upon and the level of skill in the particular art would have suggested to one of ordinary skill in the art the invention as set forth in claim 13. Accordingly, we affirm.

With respect to dependent claim 13, Appellants argue at page 12 of the reply brief, "claim 13 further limits the current quote window and recites that the current quote window displays [nonfunctional descriptive material in the form of] quotes that are attributable quotes of participants in the system and further comprises [nonfunctional descriptive material in the form of] a special quote that represents total aggregate non-attributable quotes at a current market level included in an indicator in the aggregation window." We find Appellants' argument unpersuasive.

As discussed above with respect to claim 10, nonfunctional descriptive material does not distinguish over the prior art.

Therefore, we will sustain the Examiner's rejection under 35 U.S.C. § 103.

**IV. Whether the Rejection of Claim 15 Under 35 U.S.C. § 103 is proper?**

It is our view, after consideration of the record before us, that the evidence relied upon and the level of skill in the particular art would have suggested to one of ordinary skill in the art the invention as set forth in claim 15. Accordingly, we affirm.

With respect to dependent claim 15, Appellants argue at page 9 of the reply brief, "claim 15 that [nonfunctional descriptive material in the form of] the price levels are dynamically changeable depending on market conditions." We find Appellants' argument unpersuasive. Our review of Korhammer at the section cited by the Examiner (col. 8, lines 61-68), finds that "[a] \* character is used to show the most recently updated quote." Clearly, Korhammer teaches that nonfunctional descriptive material in the form of bids and offers are dynamically changeable depending on market conditions. While Korhammer does not teach nonfunctional descriptive material in the form of "price levels" as recited in claim 15, nonfunctional descriptive material does not distinguish over the prior art as discussed above with respect to claim 10.

Therefore, we will sustain the Examiner's rejection under 35 U.S.C. § 103.

**V. Whether the Rejection of Claims 16-23 Under 35 U.S.C. § 103 is proper?**

It is our view, after consideration of the record before us, that the evidence relied upon and the level of skill in the particular art would not have suggested to one of ordinary skill in the art the invention as set forth in claims 16-23.

Accordingly, we reverse.

With respect to independent claim 16, Appellants argue at page 2 of the reply brief, that there is no basis for inherency as contended by the Examiner at page 7 of the answer. We agree.

We find no basis in the references for the Examiner's position.

As the Examiner's position on inherency is also the basis for the rejection of the claims in Groups VIII and IX, we treat those claims here with Group VII.

Therefore, we will not sustain the Examiner's rejection under 35 U.S.C. § 103.

**VI. Rejection of Claims 1, 3-9, 12-13, and 18 Under  
37 CFR § 41.50(b).**

We make the following new grounds of rejection using our authority under 37 CFR § 41.50(b).

Claims 1, 3-9 and 12-13 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 1 and 3-9 are rejected under 35 U.S.C. 112, second paragraph, because claims 1 and 6 recite "a server process" and "a montage quote manager process." To ascertain the meaning of a disputed claim term "the words of a claim are generally given their ordinary and customary meaning," as would be understood by "a person of ordinary skill in the art in question at the time of the invention, i.e., as of the effective filing date of the patent application." **Phillips v. AWH Corp.**, 415 F.3d 1303, 1313 (Fed Cir. 2005) (en banc).

The term "process" within Appellants' specification would be understood to indicate "software" to be executed on a computer (hardware), but not the hardware upon which the software is executed. See Appellants' specification at lines 25-28 of page



4. As currently written, Appellants' claims 1 and 6 recite a system comprising "client stations" and disembodied server software (as a "server process" or "montage quote manager process"). As such it is unclear what apparatus Appellants are attempting to claim in claims 1 and 6. Claims 3-5 and 7-9 incorporate by dependency the problem of claim 1.

Claims 12-13 are rejected under 35 U.S.C. 112, second paragraph, because at line 1 of each they recite "comprising a current quote window" which is redundant to the limitation of "a current quote window" found in claim 10. It is unclear in claims 12-13 whether Appellants are merely referencing the limitation of claim 10, or Appellants are introducing a second "current quote window."

Claim 18 is rejected under 35 U.S.C. 112, second paragraph, because the term "the inside quote" has no antecedent basis in claim 17.

#### **VII. Rejection of Claims 1 and 3-9 Under 37 CFR § 41.50(b).**

We make the following new grounds of rejection using our authority under 37 CFR § 41.50(b).

Claims 1 and 3-9 are rejected under 35 U.S.C. 102 as being unpatentable over Korhammer. We find that Korhammer teaches the following features:

1. Column 2, lines 30-35, teach a plurality of client stations for entering quotes for securities.

As to the "server process" of claim 1, it is disembodied server software, i.e., it is descriptive material in the form of a computer program. Computer programs per se, i.e., the descriptions or expressions of the programs, are not physical "things." They are neither computer components nor processes, as they are not "acts" being performed. Such claimed computer programs do not define any structural and functional interrelationships between the computer program and other claimed elements of a computer that permits the computer program's functionality to be realized. As has been discussed above, when descriptive material is not functionally related to the substrate, the descriptive material will not distinguish the invention from the prior art in terms of patentability.

Therefore, we reject claim 1 under 35 U.S.C. 102. Claims 3-9 share the same problem as claim 1. This problem and the related problem in section VI above can both be overcome by amending claims 1 and 6 to read "server means" rather than

"server process." This amendment would result in the descriptive material ("computer program" being functionally related to the substrate (server hardware including storage).

**VIII.Rejection of Claims 16-18 and 24 Under 37 CFR § 41.50(b) .**

We make the following new grounds of rejection using our authority under 37 CFR § 41.50(b) .

Claims 16-18 and 24 are rejected under 35 U.S.C. 101 as the claimed invention is directed to non-statutory subject matter.

As to claim 16, it preempts the formula for totaling ("aggregating") numerical values (see Appellants figure 9) representing (interest in a product) at a plurality of levels.

The fact that the numerical values are labeled as "interest in a product" does not prevent preemption. Nor does the fact that the formula is duplicated as to plural levels.

When a claim applies a mathematical formula, for example, as part of a seemingly patentable process, one must ensure that it does not in reality "seek[] patent protection for that formula in the abstract." Diehr, 450 U.S. at 191. One may not patent a process that comprises every "substantial practical application" of a law of nature, because such a patent "in practical effect

would be a patent on the [law of nature] itself." Benson, 409 U.S. at 71-72; cf. Diehr, 450 U.S. at 187 (stressing that the patent applicants in that case did "not seek to pre-empt the use of [an] equation," but instead sought only to "foreclose from others the use of that equation in conjunction with all of the other steps in their claimed process"). Thus, a claim that recites a computer that solely calculates a mathematical formula (see Benson), a computer disk that solely stores a mathematical formula, or an electromagnetic carrier signal that carries solely a mathematical formula is not statutory.

Claims 17 and 18 fail to recite statutory subject matter as they merely display the result of the preempted formula of claim 16.

Claim 24 is rejected for the same reason as discussed above with respect to claim 16.

### **Conclusion**

In view of the foregoing discussion, we have not sustained the rejection under 35 U.S.C. § 103 of claims 1, 3-9, and 16-23; and we have sustained the rejection under 35 U.S.C. § 103 of claims 10, 12-15, and 24.

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We have entered a new grounds of rejection against claims 1, 3-9, 12-13, 16-18, and 24 under 37 CFR § 41.50(b).

As indicated *supra*, this decision contains a new grounds of rejection pursuant to 37 CFR § 41.50(b) (effective September 13, 2004).

37 CFR § 41.50(b) provides that, "[a] new ground of rejection pursuant to this paragraph shall not be considered final for judicial review."

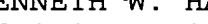
37 CFR § 41.50(b) also provides that the Appellant, **WITHIN TWO MONTHS FROM THE DATE OF THE DECISION**, must exercise one of the following two options with respect to the new grounds of rejection to avoid termination of proceedings (37 CFR § 1.197 (b) (amended effective September 13, 2004)) as to the rejected claims:


- (1) Submit an appropriate amendment of the claims so rejected or new evidence relating to the claims so rejected, or both, and have the matter reconsidered by the examiner, in which event the proceeding will be remanded to the examiner ...
- (2) Request that the proceeding be reheard under 37 CFR § 41.52 by the Board upon the same record ...

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No time period for taking any subsequent action in connection with this appeal may be extended under 37 CFR § 1.136(a)(1)(iv).

**AFFIRMED-IN-PART**  
**37 CFR § 41.50(b)**

  
KENNETH W. HAIRSTON  
Administrative Patent Judge

  
HOWARD B. BLANKENSHIP  
Administrative Patent Judge

  
ALLEN R. MACDONALD  
Administrative Patent Judge

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